

REMARKS

Upon entry of the revisions sought by this *Preliminary Amendment*, the PCT International Application will enter the national stage having ten (10) claims. Claim 1 is the sole independent claim. It is directed to a rock boring device.

The PCT International Application was originally filed with thirteen claims. On February 23, 2000, the *International Search Report* (ISR) issued. Only Category "A" prior art was found during the search, i.e., documents indicative of the general state of the art that are not considered to be of particular relevance. In response to a timely-filed *Demand*, the International Preliminary Examining Authority (IPEA) issued the *International Preliminary Examination Report* (IPER) on the basis of the international application as originally filed. The IPEA found novelty, inventive step and industrial applicability in all of the pending claims (i.e., claims 1-13).

This *Preliminary Amendment* revises the claims. In particular, claims 8-10 have been cancelled because omnibus claims are not allowed by U.S. patent regulations. Claims 1-7 and 11-13 have been amended to improve clarity in accordance with 35 U.S.C. §112, second paragraph.

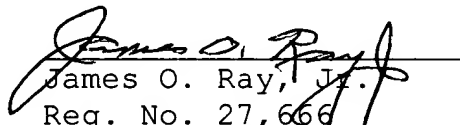
In addition, claims 3, 5-7 and 11-13 have been revised to comport with other U.S. drafting practices. Specifically, these claims were written as multiple dependent claims, with claim 3 serving as the basis for the subsequent multiple dependent claims.

According to M.P.E.P. §608.01(n), "a multiple dependent claim may not serve as a basis for any other multiple dependent claim, either directly or indirectly." The multiple dependencies in these claims have thus been eliminated as shown herein.

Please, therefore, examine this application for patent on the basis of the claims 1-7 and 11-13 as amended herein.

If the Examiner has any questions regarding this *Preliminary Amendment*, he/she is invited to call the undersigned at the telephone number listed below.

Respectfully submitted,


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APPENDIX I

MARKED-UP COPY OF CLAIMS

(Provided pursuant to 37 C.F.R. §1.121(c) (1) (ii))

1. (Amended) A rock boring device including a rotary disc cutter, wherein [the] said rotary disc cutter is driven in an oscillating manner and [also] at least one of driven [or] and free to nutate.

2. (Amended) A rock boring device as claimed in Claim 1, wherein [the] said rock boring device includes a mounting section for [the] said rotary disc cutter and a driven section, and wherein [the] said mounting section is angularly offset from [the] an axis of [the] said driven section whereby [the] said rotary disc cutter will both oscillate and nutate.

3. (Amended) A rock boring machine, incorporating a rock boring device as claimed in [either] Claim 1 [or 2], wherein [the] said rock boring device is mounted on a boom.

4. (Amended) A rock boring machine as claimed in Claim 3, wherein [the] said boom is adapted to pivot about a vertical axis.

5. (Amended) A rock boring machine as claimed in Claim 3 [or 4], wherein [the] said boom is adapted to pivot about a horizontal axis.

6. (Amended) A rock boring machine as claimed in Claim 3 [or 4], wherein [the] said rock boring device is supported by said boom whereby as to be pivotable about an axis extending longitudinally of said boom.

7. (Amended) A rock boring machine as claimed in [any one of Claims 3 to 6] Claim 3, wherein [the] said rock boring device is supported to pivot relative to said boom.

8. (Canceled) A rock boring device substantially as hereinbefore described with reference to Figures 1 to 3 of the accompanying drawings.

9. (Canceled) A rock boring machine incorporating a rock boring device as claimed in Claim 8.

10. (Canceled) A rock boring machine substantially as hereinbefore described with reference to Figures 4 and 5, or Figure 6, of the accompanying drawings.

11. (Amended) A rock boring machine as claimed in [any one of Claims 3 to 7, or Claims 9 and 10] Claim 3, wherein a plurality of said rock boring devices are carried by [the] said rock boring machine.

12. (Amended) A rock boring machine as claimed in [any one of Claims 3 to 7, or Claims 9 to 11] Claim 3, wherein a velocity of said rotary disc [the] cutter [velocity] is controlled by interaction with a computer that processes algorithms with variable information input being provided by strain gauges and accelerometers mounted adjacent to [the] said rotary disc cutter.

13. (Amended) A rock boring machine as claimed in [any one of Claims 3 to 7, or Claims 9 to 11] Claim 3, wherein [the vehicle] said rock boring machine must be anchored or referenced to a position to insure too greater cut is not applied should [the vehicle] said rock boring machine inadvertently move from the position it was in at the commencement of [the] a cutting cycle.